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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/682,374	08/27/2001	Hidehisa Shimizu	JP920000283US1	2087
877	7590	11/19/2003	EXAMINER	
IBM CORPORATION, T.J. WATSON RESEARCH CENTER P.O. BOX 218 YORKTOWN HEIGHTS, NY 10598			CHUNG, DAVID Y	
			ART UNIT	PAPER NUMBER
			2871	

DATE MAILED: 11/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/682,374

Applicant(s)

SHIMIZU ET AL.

Examiner

David Y. Chung

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspond nc address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-14 is/are allowed.
- 6) ☒ Claim(s) 1-11 and 19 is/are rejected.
- 7) ☒ Claim(s) 15-18 and 20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_ 6) ☐ Other: \_\_\_\_

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**1. Claims 1-6 rejected under 35 U.S.C. 102(e) as being anticipated by Kim (U.S. 6,177,970).**

As to claim 1, Kim discloses an in-plane switching mode liquid crystal display having gate and signal lines arrayed in a matrix on one substrate. See figures 1 and 2. Note in figure 2, the common electrode 310 being arranged above gate line 20 and signal line 70 with insulating layer 80 interposed between. Note in figure 1, the pixel electrode comprising first electrode 720 and second electrode 40, electrically connected to each other through insulating layer 80 by contact 810.

As to claim 2, also see figures 1 and 2 of Kim. Note in figure 1, the pixel electrode 40 is arranged in an intermediate position between two adjacent common electrodes 310. The pixel electrode is provided with a first electrode 40 arranged in the

same layer as common electrode 310 and a second electrode 720 arranged in the same layer as signal line 70 with the first and second electrodes being electrically connected through an insulating layer 80 by contact 810.

As to claim 3, the common electrode comprises a common line 30, which overlaps signal line 70 in the thickness direction of the display panel as shown in figure 1 of Kim.

As to claim 4, a portion of electrode 40 overlaps a portion of electrode 720 when viewed from above, as shown in figure 1 of Kim. Insulating layer 80 is interposed between.

As to claim 5, electrode 40 is extended over substantially the full length of the pixel in the direction of the signal line when viewed from above, as shown in figure 1 of Kim.

As to claim 6, electrode 720 is connected to a TFT for controlling the drive voltage to the pixel electrodes, as shown in figure 1 of Kim.

**2. Claims 7-11 and 19 rejected under 35 U.S.C. 102(e) as being anticipated by Yanagawa et al. (U.S. 6,552,770).**

As to claim 7, Yanagawa et al. discloses an in-plane switching type liquid crystal display device. See figure 1. Note the gate line 2, signal line 3, pixel electrode 5 and counter electrode 4A. Pixel electrode 5 contains horizontal portions formed over counter voltage line 4. These portions are considered to be shielding electrodes. Since the shielding electrodes are electrically connected to the pixel electrodes, their electrical potentials are the same.

As to claim 8, according to figure 1 of Yanagawa et al., the counter electrodes 4A are closer to the signal lines 3 than the pixel electrodes or shielding electrodes.

As to claim 9, according to figure 1 of Yanagawa et al., both the pixel electrodes and counter electrodes have a bent shape.

As to claims 10 and 11, according to figure 1 of Yanagawa et al., a storage capacitor is provided by the overlap of the shielding electrodes and the counter voltage line. Bent portions of the counter electrodes 4A at both sides of the pixel electrode are mutually linked by counter voltage line 4.

As to claim 19, the shield electrodes are in the same plane as signal line 3.

***Response to Arguments***

Applicant's arguments filed August 28, 2003 have been fully considered but they are not persuasive. In regards to claims 1-6, examiner believes that because the drain electrode of Kim is electrically connected to electrodes 40 and transmits the video signal to them, it is part of the pixel electrode that generates an electric field with the common electrode. Likewise, because the common line is electrically connected to electrodes 310 and transmits a common potential to them, it is part of the common electrode that generates an electric field with the pixel electrode. In regards to claims 7-11, applicant's claim language does not specify what is being shielded or how it is being shielded. The aforementioned portion of the pixel electrode of Yanagawa et al. can be considered a shield electrode, since it would presumably shield the liquid crystal molecules directly above from the common potential of common line 4.

***Allowable Subject Matter***

Claims 15-18 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art of Kim did not teach common electrodes arranged immediately above the signal lines or gate lines. Examiner interprets the term "immediately above" as meaning directly above so as to overlap.

Claim 20 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art of Yanagawa et al. taught shield electrodes in the same plane as the pixel electrodes.

Claims 12-14 allowed.

The following is a statement of reasons for the indication of allowable subject matter: the prior art of Komatsu did not teach shield portions for shielding electric fields from the signal lines. It does not seem that any electrode disclosed by Komatsu does shielding of this sort.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

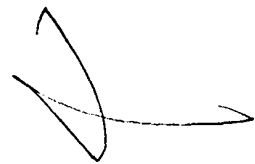
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Chung whose telephone number is (703) 306-0155. The examiner can normally be reached on Monday-Friday from 8:30 am to 5:00 pm.

A handwritten signature in black ink, appearing to be 'K. Parker', written over a horizontal line.

**KENNETH PARKER**  
**PRIMARY EXAMINER**

David Chung  
GAU 2871  
11/16/03